



COUNTY OF SAN DIEGO
Great Government Through the General Management System – Quality, Timeliness, Value
DEPARTMENT OF HUMAN RESOURCES

CLASS SPECIFICATION

CLASSIFIED

VECTOR ECOLOGIST	Class No. 004764
SENIOR VECTOR ECOLOGIST	Class No. 004767
SUPERVISING VECTOR ECOLOGIST	Class No. 004765

■ CLASSIFICATION PURPOSE

To perform professional work involved in vector-borne disease and vector nuisance abatement through surveillance, identification, analysis, prevention and control of vertebrate and invertebrate vectors, their hosts, and sources within the county; and to perform related work as required.

■ DISTINGUISHING CHARACTERISTICS

Positions in these classes are found in the Vector Surveillance and Control Division, Department of Environmental Health. Vector ecologists are professional biologists required to possess "unlimited" California Department of Health Services's Certification in Mosquito Control, Vertebrate Vector Control, and Terrestrial Invertebrate Vector Control.

Vector Ecologist:

This is the journey level in the Vector Ecologist series. Under general supervision, incumbents function as subject matter experts in vector biology, surveillance and control, with responsibility for one or more specific vector surveillance and control program areas and/or a geographical area.

Senior Vector Ecologist:

This is the lead worker/technical specialist class in the Vector Ecologist class series. Under general supervision, incumbents lead the work of a group of specialized technical and professional staff and function as subject matter experts in vector biology, surveillance and control, with responsibility for planning, organizing and coordinating one or more specific vector surveillance and control program areas and/or a geographical area.

Supervising Vector Ecologist:

This is the first-line supervisor class of the Vector Ecologist class series. Under general direction, Supervising Vector Ecologists supervise the work of professional, technical and support personnel, and are responsible for planning, organizing and coordinating multiple program areas throughout the county. This class is distinguished from the next higher class, Chief, Environmental Health, in that the latter is in the Unclassified Service and is responsible for directing, planning and managing the work of a division within the department.

■ FUNCTIONS

The examples of functions listed in the class specification(s) are representative but not necessarily exhaustive or descriptive of any one position in the class(es). Management is not precluded from assigning other related functions not listed herein if such functions are a logical assignment for the position.

Vector Ecologist

Essential Functions:

1. Collects, processes, and identifies specimens, and evaluates their health significance.
2. Plans and conducts vector-borne disease surveys and surveillance.
3. Conducts vector population studies and areas surveys.
4. Conducts inspections and investigations of major sources of vector problems.
5. Develops and recommends procedures and methods for preventing and controlling vector-borne disease and major vector nuisances.

6. Develops and recommends source management approaches, to include prevention, reduction, or elimination.
7. Enforces and coordinates compliance with state and local laws and regulations.
8. Serves as subject matter expert.
9. Prepares appropriate legal briefs and documentation.
10. Serves as a witness in litigation.
11. Develops and provides training to division and department staff.
12. Develops public information/education material.
13. Responds to citizen complaints and requests for services.
14. Prepares correspondence and responds to citizen inquiries.
15. Provides advice and consultation to citizens on prevention and control of public health pests.
16. Compiles and analyzes data.
17. Prepares records, documents, and reports for technical, operational, and administrative use.
18. Attends community meetings and participates in community outreach events.
19. Provides courteous, high quality service to members of the public by personally responding to requests for service or making appropriate referral.

Senior Vector Ecologist

Essential Functions:

All the functions listed above and

1. Certifies accuracy of identification of specimens.
2. Reviews proposals submitted by industry for the prevention and control of vector breeding.
3. Monitors and works closely with industry, other agencies, and public to promote and achieve compliance with appropriate laws and regulations.
4. Coordinates intra- and inter-agency activities relating to vector source management, surveillance, and control.
5. Serves on, staffs, and makes presentations to commissions, boards, councils, community groups, committees, task forces and work groups.
6. Leads the work of a group of specialized technical and professional staff.
7. Acts in the absence of the supervisor.
8. Develops and provides training programs.

Supervising Vector Ecologist

Essential Functions:

All the functions listed above and

1. Supervises, trains, and evaluates subordinates.
2. Supervises, evaluates, and refines source management, vector biology, vector-borne disease surveillance, and vector prevention efforts.
3. Coordinates, evaluates, and recommends improvements in vector control efforts.
4. Supervises inspections, investigations, enforcement, and abatement of major sources.
5. Supervises evaluation of findings and control measures.

6. Develops procedures, protocols, guidelines, and methods for managing major vector nuisances and minimizing and containing vector-borne diseases.
7. Coordinates and supervises the review and comment process on land and water use projects and proposals for vector prevention and control.
8. Coordinates and supervises the progressive enforcement strategy utilized by the division.
9. Develops ordinances, policies, procedures, and guidelines for compliance with vector control laws and regulations.
10. Coordinates and supervises compliance with federal, state, and local laws and regulations.
11. Coordinates and supervises inter- and intra-agency activities relating to vector source management, surveillance, and control.
12. Coordinates vector surveillance and control activities with federal, state, and other local jurisdictions and agencies, such as: Fish and Wildlife Service; Army Corps of Engineers; Division of Forestry, Fish, and Game; Pesticide Regulations; Parks and Recreation; Agriculture; and Health Services among others.
13. Oversees compilation, preparation, analysis, and presentation of reports, records, documents, and other information.
14. Responds to inquiries and provides information to public groups and news media.
15. Coordinates pesticide application techniques and procedures and oversees implementation of Integrated Pest Management strategies.
16. Develops, reviews, updates, modifies, and supervises public information, community outreach, and customer service activities.
17. Develops and provides training programs.

■ KNOWLEDGE, SKILLS, AND ABILITIES

Knowledge of:

The following apply to all classes:

- Medical entomology, parasitology, and epidemiology.
- Vector and animal ecology.
- Vector-borne disease prevention and control.
- Vector control methodologies: naturalistic, comprehensive, and integrated pest management.
- Vector source management, source reduction and management.
- Environmental health protection principles.
- Pesticide laws, regulations, uses, and safety procedures.
- Environmental resources protection and wildlife management related to vector control.
- Federal, state, and local laws and regulations pertaining to vector control.
- Land use practices related to vector control.
- Water reclamation and management techniques related to vector control.
- Waste management practices related to vector control.
- Statistical analysis principles.
- Agricultural practices related to vector control.
- Surveillance systems analysis and evaluation principles.
- Public information and community education principles.
- Telephone, office, and online etiquette.
- County customer service objectives and strategies.
- The General Management System in principle and in practice.

Senior Vector Ecologist / Supervising Vector Ecologist (in addition to the above):

- Staff development and training principles.
- Public and community relations principles.
- Personnel supervision principles and practices.

Skills and Abilities to:

The following apply to all classes:

- Evaluate sensitive issues and situations and resolve industry and citizen concerns with sensitivity and tact.
- Participate effectively with industry, public agencies, and citizen groups to solve vector problems.

- Enforce appropriate laws and regulations.
- Prepare public information and educational material for private industry and the general public.
- Communicate clearly and effectively orally and in writing.
- Evaluate issues of health importance as they relate to vector surveillance and control.
- Communicate effectively with a variety of individuals representing diverse cultures and backgrounds and function calmly in situations, which require a high degree of sensitivity, tact, and diplomacy.
- Treat County employees, representatives of outside agencies, and members of the public with courtesy and respect.
- Assess the customer's immediate needs and ensure customer's receipt of needed services through personal service or referral.
- Provide prompt, efficient, and responsive service.
- Exercise appropriate judgment in answering questions and releasing information; analyze and project consequences of decisions and/or recommendations.

Senior Vector Ecologist (in addition to the above):

- Coordinate implementation of procedures to prevent and control vector-borne diseases and major vector problems.
- Plan, organize, direct, and coordinate one or more vector surveillance and control program areas.

Supervising Vector Ecologist (in addition to the above):

- Supervise, evaluate, and coordinate the work of a group of technical and professional staff.
- Plan, organize, and coordinate the work of a vector surveillance/control program.

■ EDUCATION/EXPERIENCE

Education, training, and/or experience that demonstrate possession of the knowledge, skills, and abilities listed above. Examples of qualifying education/experience are:

Vector Ecologist:

1. A bachelor's degree from an accredited college or university in a biological science such as medical entomology, parasitology, biology, zoology, or a closely related field, AND, two (2) years of professional level experience in vector surveillance and control, dealing with aquatic invertebrate vectors, terrestrial invertebrate vectors, and vertebrate vectors, OR, four (4) years of professional experience in an environmental health program that included experience with vector biology and control, or land use and source management related to vector biology and control, OR
2. A master's degree from an accredited college or university in a biological science such as medical entomology, parasitology, biology, zoology, or a closely related field.

Senior Vector Ecologist:

1. A bachelor's degree from an accredited college or university in a biological science such as medical entomology, parasitology, biology, zoology, or closely related field, AND, three (3) years of progressively responsible experience as a Vector Ecologist or comparable professional level position, which included responsibility for coordinating vector ecology, surveillance and control programs, and land-use and source management related to vector biology and control, OR
2. A master's degree from an accredited college or university in a biological science such as medical entomology, parasitology, biology, zoology, or closely related field, AND, one (1) year of progressively responsible experience as a Vector Ecologist or comparable professional level position, which included responsibility for coordinating vector ecology, surveillance and control programs, and land-use and source management as it relates to vector biology and control.

Supervising Vector Ecologist:

1. A bachelor's degree from an accredited college or university in a biological science such as medical entomology, parasitology, biology, zoology, or closely related field, AND, five (5) years of progressively responsible experience as a Vector Ecologist or comparable professional level position, which included responsibility for coordinating vector ecology, surveillance and control programs, and land-use and source management related to vector biology and control. This experience must have included two (2) years of experience supervising the staff and activities in these program areas, OR
2. A master's degree from an accredited college or university in a biological science such as medical entomology, parasitology, biology, zoology, or closely related field, AND, three (3) years of progressively responsible experience as a Vector Ecologist or comparable professional level position, which included responsibility for coordinating vector ecology, surveillance and control programs, and land-use and source management related to vector biology and control. This experience must have included two (2) years of experience supervising the staff and activities in these program areas.

■ ESSENTIAL PHYSICAL CHARACTERISTICS

The physical characteristics described here are representative of those that must be met by an employee to successfully perform the essential functions of the classification(s). Reasonable accommodation may be made to enable an individual with qualified disabilities to perform the essential functions of a job, on a case-by-case basis.

Continuous upward and downward flexion of the neck. Frequent: lifting of objects weighing up to 50 pounds, sitting, and repetitive use of hands to operate computers, printers and copiers. Occasional: walking, standing, bending and twisting of neck, bending and twisting of waist, squatting, simple grasping, reaching above and below shoulder level, and lifting of objects weighing up to 70 pounds.

■ SPECIAL NOTES, LICENSES, OR REQUIREMENTS

License

A valid California class C driver's license, which must be maintained throughout employment in this class, is required at time of appointment, or the ability to arrange necessary and timely transportation for field travel. Employees in this class may be required to use their own vehicle.

Certification/Registration

Must obtain "unlimited" California Department of Health Services's Certification in Mosquito Control, Terrestrial Invertebrate Vector Control, and Vertebrate Vector Control within twelve (12) months of appointment or be separated from service. Failure to maintain active certifications at all times will result in separation from service. California registration as an Environmental Health Specialist within 24 months of employment is highly desirable.

Working Conditions

Subject to emergency call on a 24-hour basis. May be exposed to hazardous gases, chemicals, vectors, and inclement weather conditions.

Background Investigation

Must have a reputation for honesty and trustworthiness. Misdemeanor and/or felony convictions may be disqualifying depending on type, number, severity, and recency. Prior to appointment, candidates will be subject to a background investigation.

Probationary Period

Vector Ecologist:

Incumbents appointed to permanent positions in this class shall serve a probationary period of 6 months (Civil Service Rule 4.2.5).

Senior Vector Ecologist and Supervising Vector Ecologist:

Incumbents appointed to permanent positions in these classes shall serve a probationary period of 12 months (Civil Service Rule 4.2.5).

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Vector Ecologist (Class No. 004764)	Union Code: PR	Variable Entry: Y
Senior Vector Ecologist (Class No. 004767)	Union Code: PR	Variable Entry: Y
Supervising Vector Ecologist (Class No. 004765)	Union Code: MM	Variable Entry: Y